



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0098; Project Identifier MCAI-2020-01121-T; Amendment 39-21564; AD 2021-11-02]

RIN 2120-AA64

Airworthiness Directives; MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2019-22-07, which applied to all MHI RJ Aviation ULC Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, Model CL-600-2D24 (Regional Jet Series 900) airplanes, and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. AD 2019-22-07 required revising the existing airplane flight manual (AFM) to include a limitation and an abnormal operating procedure for the Automatic Flight Control System (AFCS). This AD requires revising the existing AFM and adding airplanes to the applicability. This AD was prompted by a finding that the limitation and abnormal operating procedure did not include reference to a certain mode. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of

certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For Bombardier service information identified in this final rule, contact MHI RJ Aviation ULC, 12655 Henri-Fabre Blvd., Mirabel, Québec J7N 1E1 Canada; Widebody Customer Response Center North America toll-free telephone +1-844-272-2720 or direct-dial telephone +1-514-855-8500; fax +1-514-855-8501; email thd.crj@mhjr.com; Internet <https://mhjr.com>. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0098.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0098; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Steven Dzierzynski, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7367; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2018-32R1, dated August 21, 2020 (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for all MHI RJ Aviation ULC Model CL-600-2B19 (Regional Jet Series 100 & 440), CL-600-2C10 (Regional Jet Series 700, 701 & 702), CL-600-2C11 (Regional Jet Series 550), CL-600-2D15 (Regional Jet Series 705), CL-600-2D24 (Regional Jet Series 900), and CL-600-2E25 (Regional Jet Series 1000) airplanes. You may examine the MCAI in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0098.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2019-22-07, Amendment 39-19786 (85 FR 439, January 6, 2020) (AD 2019-22-07). AD 2019-22-07 applied to all MHI RJ Aviation ULC Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, Model CL-600-2D24 (Regional Jet Series 900) airplanes, and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. The NPRM published in the *Federal Register* on February 24, 2021 (86 FR 11165). The NPRM was prompted by a finding that the limitation and abnormal operating procedure did not include reference to (V) ALTV CAP mode and a finding that the MHI RJ Aviation ULC Model CL-600-2C11 (Regional Jet Series 550) airplanes are also affected by the same unsafe condition (Model CL-600-2B19 airplanes do not have (V) ALTS CAP or (V) ALTV CAP mode). The risk of the unsafe condition also exists during (V) ALTV CAP mode. The NPRM proposed to require revising the existing AFM and adding airplanes to the applicability. The FAA is issuing this AD to address an engine failure, if it occurs during or before a climb while in ALTS CAP, (V) ALTS CAP, or (V) ALTV CAP mode, which may cause the airspeed to

drop significantly below the safe operating speed, possibly resulting in reduced control of the airplane. See the MCAI for additional background information.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA has considered the comment received. The Air Line Pilots Association, International (ALPA) stated that it supports the NPRM.

Conclusion

The FAA reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information under 1 CFR Part 51

Bombardier has issued the following service information, which describes procedures for revising the existing AFM by including a limitation that specifies a warning for the AFCS and an abnormal operating procedure if an engine failure occurs during or before a climb while in ALTS CAP mode, (V) ALTS CAP mode, or (V) ALTV CAP mode, as applicable. These documents are distinct since they apply to different airplane models.

- Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS”; and Section 05-02, “In-Flight Engine Failures,” of Chapter 5, “ABNORMAL PROCEDURES”; of the Bombardier CRJ Series Regional Jet Model CL-600-2B19 AFM, CSP A-012, Volume 1, Revision 73, dated January 3, 2020.

• Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS”; and Section 05-02, “In-Flight Engine Failures,” of Chapter 5, “ABNORMAL PROCEDURES”; of the Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) AFM, CSP B-012, Revision 31, dated May 8, 2020.

• Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS”; and Section 05-02, “In-Flight Engine Failures,” of Chapter 5, “ABNORMAL PROCEDURES”; of the Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and CL-600-2D15 (Series 705) AFM, CSP C-012, Volume 1, Revision 24, dated March 27, 2020.

• Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS”; and Section 05-02, “In-Flight Engine Failures,” of Chapter 5, “ABNORMAL PROCEDURES”; of the Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) AFM, CSP D-012, Revision 23, dated February 14, 2020.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 992 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
New actions	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$84,320

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA

amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive (AD) 2019-22-07, Amendment 39-19786

(85 FR 439, January 6, 2020); and

b. Adding the following new AD:

2021-11-02 MHI RJ Aviation ULC (Type Certificate Previously Held by

Bombardier, Inc.): Amendment 39-21564; Docket No. FAA-2021-0098; Project

Identifier MCAI-2020-01121-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2019-22-07, Amendment 39-19786 (85 FR 439, January 6, 2020) (AD 2019-22-07).

(c) Applicability

This AD applies to the MHI RJ Aviation ULC airplanes identified in paragraphs (c)(1) through (6) of this AD, certificated in any category, all manufacturer serial numbers.

(1) Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes.

(2) Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes.

(3) Model CL-600-2C11 (Regional Jet Series 550) airplanes.

(4) Model CL-600-2D15 (Regional Jet Series 705) airplanes.

(5) Model CL-600-2D24 (Regional Jet Series 900) airplanes.

(6) Model CL-600-2E25 (Regional Jet Series 1000) airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 22, Auto Flight.

(e) Reason

This AD was prompted by a report that during the Automatic Flight Control System (AFCS) ALTS CAP, (V) ALTS CAP, or (V) ALTV CAP mode, the flight guidance/autopilot does not account for engine failure while capturing an altitude. The FAA is issuing this AD to address an engine failure, if it occurs during or before a climb while in ALTS CAP, (V) ALTS CAP, or (V) ALTV CAP mode, which may cause the airspeed to drop significantly below the safe operating speed, possibly resulting in reduced control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Revision of the Airplane Flight Manual (AFM)

Within 60 days after the effective date of this AD: Revise the existing AFM to include the information in Subject 2, “AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS),” of Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS”; and Subject 1.C, “Engine Failure in Climb During ALTS CAP,” or Subject 1.D, “Engine Failure in Climb During (V) ALTS CAP or (V) ALTV CAP,” of Section 05-02, “In-flight Engine Failures,” of Chapter 5, “ABNORMAL PROCEDURES”; as applicable; of the applicable AFM identified in figure 1 to paragraph (g) of this AD.

Figure 1 to paragraph (g) - AFM Revision

MHI RJ Aviation ULC Airplane Model	Bombardier AFM	AFM Revision
CL-600-2B19	Bombardier CRJ Series Regional Jet Model CL-600-2B19 AFM, CSP A-012, Volume 1	Revision 73, dated January 3, 2020
CL-600-2C10 CL-600-2C11	Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) AFM, CSP B-012	Revision 31, dated May 8, 2020
CL-600-2D15 CL-600-2D24	Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and CL-600-2D15 (Series 705) AFM, CSP C-012, Volume 1	Revision 24, dated March 27, 2020
CL-600-2E25	Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) AFM, CSP D-012	Revision 23, dated February 14, 2020

(h) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD, using the applicable AFM specified in figure 2 to paragraph (h) of this AD.

Figure 2 to paragraph (h) - Credit for Previous AFM Revision

MHI RJ Aviation ULC Airplane Model	Bombardier AFM	CRJ Series Regional Jet AFM Revision
CL-600-2B19	Bombardier CRJ Series Regional Jet Model CL-600-2B19 AFM, CSP A-012, Volume 1	Revision 70, dated July 13, 2018; or Revision 68, dated August 4, 2017
CL-600-2C10 CL-600-2C11	Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) AFM, CSP B-012	Revision 29, dated September 20, 2019
CL-600-2D15 CL-600-2D24	Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and CL-600-2D15 (Series 705) AFM, CSP C-012, Volume 1	Revision 22, June 7, 2019
CL-600-2E25	Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) AFM, CSP D-012	Revision 22, dated September 6, 2019

(i) Other FAA AD Provisions

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method

approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or MHI RJ Aviation ULC's TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(j) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2018-32R1, dated August 21, 2020, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0098.

(2) For more information about this AD, contact Steven Dzierzynski, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7367; email 9-avs-nyaco-cos@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (k)(3) and (4) of this AD.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Section 02-08, "System Limitations," of Chapter 2, "LIMITATIONS," of Bombardier CRJ Series Regional Jet Model CL-600-2B19 Airplane Flight Manual (AFM), CSP A-012, Volume 1, Revision 73, dated January 3, 2020.

(ii) Section 05-02, “In-flight Engine Failures,” of Chapter 5, “ABNORMAL PROCEDURES,” of Bombardier CRJ Series Regional Jet Model CL-600-2B19 Airplane Flight Manual (AFM), CSP A-012, Volume 1, Revision 73, dated January 3, 2020.

(iii) Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS,” of Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) AFM, CSP B-012, Revision 31, dated May 8, 2020.

(iv) Section 05-02, “In-flight Engine Failures,” of Chapter 5, “ABNORMAL PROCEDURES,” of Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) AFM, CSP B-012, Revision 31, dated May 8, 2020.

(v) Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS,” of Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and Model CL-600-2D15 (Series 705) AFM, CSP C-012, Volume 1, Revision 24, dated March 27, 2020.

(vi) Section 05-02, “In-flight Engine Failures,” of Chapter 5, “ABNORMAL PROCEDURES,” of Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and Model CL-600-2D15 (Series 705) AFM, CSP C-012, Volume 1, Revision 24, dated March 27, 2020.

(vii) Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS,” of Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) AFM, CSP D-012, Revision 23, dated February 14, 2020.

(viii) Section 05-02, “In-flight Engine Failures,” of Chapter 5, “ABNORMAL PROCEDURES,” of Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) AFM, CSP D-012, Revision 23, dated February 14, 2020.

(3) For Bombardier service information identified in this AD, contact MHI RJ Aviation ULC, 12655 Henri-Fabre Blvd., Mirabel, Québec J7N 1E1 Canada; Widebody Customer Response Center North America toll-free telephone +1-844-272-2720 or

direct-dial telephone +1-514-855-8500; fax +1-514-855-8501; email thd.crj@mhij.com;

Internet <https://mhij.com>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on May 11, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2021-11956 Filed: 6/7/2021 8:45 am; Publication Date: 6/8/2021]